

REMARKS

This is in response to the Office Action dated July 17, 2009. Claims 1, 3, and 4 are pending in the application. The claims are amended to specify that component (A) is a copolyester. Component (A) can no longer be a polyoxycarboxylic acid. Additionally, upper limit of hydroxy carboxylic acid units of 5 or less carbon atoms in the claims is specified to be 98% by mol, based upon such disclosure as that in lines 8-18 on page 9 of the specification. No new matter is introduced by this Amendment.

Claims 1, 3, and 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by, or alternatively under 35 U.S.C. § 103(a) as being unpatentable over, US 4,565,851 (Barbee). Office Action, pages 2-3. To the extent that it might be applied to claims 1, 3, and 4 in their current form, the rejection is respectfully traversed.

Barbee discloses containers having improved resistance to gas permeability. The Barbee containers require a polymer blend comprising a first polyester comprising polyglycolic acid (a type of polyoxycarboxylic acid) and a second, different polyester. Examples of the Barbee invention show blends of polyethylene terephthalate (a crystalline polyester) and 10, 25, and 50 weight percent polyglycolic acid, which were compounded by melt extrusion. This blend is similar in composition and preparation to that of Example 4 in the present specification.

The present claims no longer recite polyoxycarboxylic acids. Accordingly, the present claims are not anticipated by Barbee.

In the outstanding Office Action, the Examiner alleged that the polyglycolic acid and second polyester of Barbee have similar intrinsic viscosities to Applicants' components (A) and (B), respectively. Since the polyoxycarboxylic acid embodiments are no longer recited in Applicants' claims, however, the polyglycolic acid and second polyester of Barbee are not similar to the presently claimed two-resin composition.

The Examiner contends that "Since Barbee teaches the same composition as claimed, the ratio S_{AA}/S_{BB} of the polyester resin composition would inherently be the same as claimed." Applicants respectfully disagree.

In melt-mixing a polyester resin composition, simple mixing does not occur. Instead, an ester exchange reaction occurs. Moreover, as discussed in Applicants' specification, the S_{AA}/S_{BB} value is an indication of a proportion of polymer blocks of continuously bonded hydroxy carboxylic acid units to isolated hydroxyl carboxylic acid units. The claimed S_{AA}/S_{BB} parameter is not satisfied when the ester exchange reaction is insufficient or when the ester exchange reaction progresses too far.

As indicated in the present specification, when a polyester having a high copolymerization ratio of a hydroxy carboxylic acid, e.g. polyglycolic acid, is used, the melt mixing is desirably carried out for a longer period of time. Examples 3 of the present application discloses 10 weight percent of a copolyester containing 70.1 mol-% of glycolic acid and 90 weight percent of polyethylene terephthalate are melt-mixed to prepare a resin composition having S_{AA}/S_{BB} of 1.2. The claimed parameter is not satisfied, however, in Comparative Example 1 of the present invention, which discloses 10 weight percent of polyglycolic acid and 90 weight percent of polyethylene terephthalate melt-mixed under the same condition as those of Example 3, resulting in S_{AA}/S_{BB} of 36. Thus, even if it is conceded that there is an example in a reference which refers to melt-mixing of polyglycolic acid and polyethylene terephthalate, this alone does not constitute a suggestion of S_{AA}/S_{BB} within the specified range.

Applicants' invention enables the manufacture of a resin composition which has good gas barrier properties and which is excellently balanced in mechanical properties, heat resistance, transparency, and hue. These beneficial results are obtained by controlling the ratio S_{AA}/S_{BB} to be in the specified range ($0.03 < S_{AA}/S_{BB} < 30$). Applicants' novel and inventive concept of controlling S_{AA}/S_{BB} to be greater than 0.03 and less than 30 is neither taught nor suggested by Barbee.

The presently claimed invention considered as a whole is, therefore, not obvious from the Barbee disclosure. Withdrawal of the rejections based upon the Barbee reference is in order and is earnestly solicited.


Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Richard Gallagher, Reg. No.

28,781, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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